2664

PATENTS

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	**Thomas J. Cloonan**	Group No.:	**2664**
Serial No.:	**09/620,821**	Examiner:	**Harper, Kevin C.**
Filed:	**July 21, 2000**	Docket:	**7014**
Title:	**Congestion Control In A Network Device Having A Buffer Curcuit**		

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage for first class mail under 37 CRF § 1.8 addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

John L. Doughty — 10/25/02
John L. Doughty — Date

PETITION FOR WITHDRAWAL OF ABANDONMENT UNDER 37 CFR § 1.181(a)

Attention: Office of Petitions
Assistant Commissioner for Patents
Washington, DC 20231

Dear Sir/Madam:

The above-identified application became abandoned for failure to file a timely and proper reply to a notice or action by the United States Patent and Trademark Office.

APPLICANT HEREBY PETITIONS FOR WITHDRAWAL OF THE HOLDING OF ABANDONMENT OF THIS APPLICATION

Pursuant to MPEP § 711.03(c)I, this petition does not require a fee.

A proper reply was filed responsive to the Office action mailed March 18, 2002. An Amendment was filed in response to the action by Joseph P. Krause, registration number 32,578, on April 29, 2002. Thus, a reply was timely filed. A copy of said Amendment, the accompanying Certificate of Transmission under 37 CFR 1.8 and the accompanying facsimile cover sheet are enclosed herewith. The facsimile cover sheet indicates that the Amendment was transmitted from Mr. Krause's law firm, Vedder, Price, Kaufman and Kammholz on April 29, 2002, at 16:34 hours.

Since the above referenced application was filed on or after June 8, 1995, no terminal disclaimer is required.

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Respectfully submitted,

Arris International, Inc.

John L. Doughty
Reg. No. 47,533

Enclosures:
Copy of Amendment
Copy of Certificate of Transmission under 37 CFR 1.8
Copy of facsimile cover sheet

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Amendment for:

U.S. Serial No. 09/620,821
Filed July 21, 2000
Docket No. 4807.00009
Examiner: K. Harper

PTO/SB/97 (08-00)
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-Amendment

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Cloonan et al. | Examiner: K. Harper

Serial No. 09/620,821 | Art Group: 2664

Filing Date: July 21, 2000 | Docket No. 4807.00009

Title: **CONGESTION CONTROL IN A NETWORK DEVICE HAVING A BUFFER CIRCUIT**

Box AF
Assistant Commissioner for
Patents and Trademarks
U.S. Patent and Trademark Office
Washington, D.C. 20231

AMENDMENT

Dear Sir:

In response to the Office Action mailed March 18, 2002, please amend the above-identified application as follows:

IN THE CLAIMS:

Cancel claims 6, 7, 11 and 12, without prejudice.

Add new independent claim ~~13~~ 23 as follows:

~~13~~ 23. (New) A method for providing data packet congestion control for a data network having a buffer circuit, each data packet comprising a priority, the method comprising the steps of:

determining the particular service flow associated with the data packet;

detecting a current data packet flow rate through the data network for the particular service flow associated with the data packet;

quantizing the data packet flow rate into four different flow rates, which are determined by comparing the service flow's data packet flow rate with a minimum data rate threshold, a maximum data rate threshold, and a mid-level data rate threshold;

determining the priority associated with a current data packet; and

processing the current packet in response to the current data packet flow rate, the data packet priority, and the current buffer circuit depth.

REMARKS

In the Office Action, claims 4 and 5 were allowed. Claims 6, 7, 11 and 12 were rejected. Claim 7 was objected to in two previous Office Actions (i.e., mailed June 6, 2001 and September 25, 2001).

During a telephone conference with the Examiner on April 19, 2002, agreement was reached between the undersigned and the Examiner that inadvertent typographical errors had been made to claim 7 in previously-filed responses. The Examiner indicated that the subject claimed in claim 7, as it was originally filed, was allowable.

In order to simplify the Examiner's consideration of the subject matter of claim 7 as it was originally filed, the Applicant has presented herein a new independent claim that includes all of the limitations of claim 7 as it was originally filed, including the limitations of original claims 1 and 6, upon which claim 7 depended. In a voice mail message left by the Examiner for the undersigned, the Examiner indicated that proposed claim 13 was not allowable over Kilkki and Skirmont.

The applicant submits that the limitations of claim 13 as amended are not shown or suggested by any reference or combination of references cited by the Examiner. Unless the Examiner can find each and every limitation of claim 13, it should be allowed.

In response to the Examiner's voice mail message of April 26, 2002 regarding the teachings of Skirmont (U.S. Pat. No. 6,252,848), the Applicant refers the Examiner to Skirmont at column 4, lines 7 – 25. In Skirmont, service flows pass through a traffic monitor. Data packets are marked "based on the [measured] rate at which the packets' pass through the traffic monitor *and a flow profile*. Packets are *not* marked on a measured data rate exclusively. (See Skirmont at column 4, lines 7 – 19.) Packets can be marked based on a burst rate or burst length.

Skirmont teaches that some flows should be assigned a "low" drop probability because of a flows importance to other flows. Such flows are marked with a "low" marking to reduce the likelihood that the packet is dropped. Some flows that have a high data rate and that may adversely affect system performance should be assigned a high drop probability and such flows are marked with a "high" probability so as to increase the likelihood that they are dropped so as to control queue depth. (See Skirmont, col. 5, lines 5 – 16.)

In Skirmont, data packets are marked (according to a *measured* rate at which they are passed through the traffic monitor) to determine the probability of dropping a packet in order to control queue size. (See column 4, lines 26 – 38.) The invention of claim 7 is distinctly different from anything disclosed in Skirmont.

In claim 7, a data packet is "associated" with a particular service flow, which is entitled to a particular service or priority level. A packet flow rate for the particular flow, *through the network,* is determined or measured from the packet. The determined *packet flow rate* is quantized. Being "quantized" is similar to being identified with, or characterized as belonging in one of four different rate groups or classes. The service level or service priority that a packet (of the particular flow) is entitled to is determined. The packet is then "processed" by the switching system (e.g., routed or switched) according to a priority that the flow is entitled to and a buffer circuit depth – not according to a probability of being dropped.

Unless the Examiner can find the *claimed* limitations of claim 13, the claim should be allowed.

Claims 6, 7, 11 and 12 have been cancelled, without prejudice.

Claims 4 and 5 are allowed.

For the reasons set forth above, the rejections have been traversed and the application is in condition for allowance.

Respectfully submitted,

Dated: 4/29/02

By: Joseph P. Krause

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